UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 73967

REGION 7
25 FUNSTON ROAD
KANSAS CITY, KANSAS 66115

North End Site
MOD985768134
1.5
5-18-84

May 18, 1984

MEMORANDUM

SUBJECT: Preliminary Assessment, Union Wire Rope (Division of ARMCO), Kansas City, Missouri

FROM: Paul E. Doherty, Acting Chief
Site Investigation Section, EP&R/ENSV

TO: Robert L. Morby
Chief, WMBR/ARWM

THRU: William J. Keffer
Chief, EP&R/ENSV

John C. Wicklund
Director, ENSV

David A. Wagoner
Director, ARWM

Attached for your review is the preliminary assessment for the above referenced site. Company officials declined to provide information on past waste handling practices and formal written inquiry by EPA is recommended.

Attachment

Preliminary Assessment of the Union Wire Rope Division of ARMCO, Inc. Kansas City, Missouri

TDD R-07-8403-20
EPA ID# MOD01686740

May 14, 1984

Submitted to: Paul E. Doherty, ARPO
Prepared by: William Kwoka

Region VII REM/FIT

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SECTION 1: INTRODUCTION

On March 27, 1984 the United States Environmental Protection Agency (EPA) tasked Ecology and Environment, Incorporated (E&E) to do a preliminary assessment of the Union Wire Rope (UWR) Division of ARMCO, Inc. The work was authorized under technical direction document (TDD) number R07-8403-20. The assigned EPA identification number for the UWR site is MOD001686740.

SECTION 2: HISTORY

The Union Wire Rope Division of ARMCO, Inc. filed a notification of hazardous waste activity with the EPA on August 18, 1980 as required under the Comprehensive Environmental Response and Liability Act (CERCLA). The UWR facility listed two hazardous wastes:

F017 Paint Wastes (now delisted)
K062 Spent Pickle Liquor

An annual hazardous waste report filed on January 10, 1983 listed another waste:

F001 Spent Halogenated Solvents

On July 1, 1982 the EPA inspected the UWR facility under the Resource Conservation and Recovery Act (RCRA) and noted that some waste 1,1,1-trichloroethane (1,1,1-TCE) was being poured down a drain in the die cleaning room. The remainder was stored in a 700 gallon tank. The RCRA inspectors were told that the drain probably emptied into the Blue River and that the stored 1,1,1-TCE was periodically burned in a boiler owned by ARMCO, Inc. Under a compliance order by the EPA, the facility stopped burning the 1,1,1-TCE and replumbed the drain to collect the spent solvent. A fine was also paid. The spent solvent is now collected and sent to approved facilities for recycling/disposal (Ref. RCRA file).

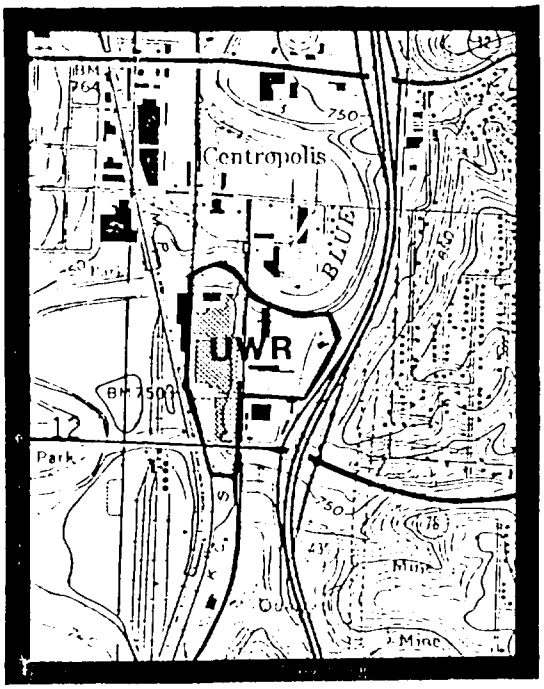
A reinspection performed in August of 1982 found a tank of 1,1,1-TCE with an open valve. The EPA requested that the contamination be cleaned up.

Union Wire Rope removed the contaminated soil and disposed of it as hazardous waste. The remaining soil was analyzed and found to contain less than 16 parts per billion of 1,1,1-TCE (Ref. RCRA file).

SECTION 3: LOCATION

The UWR facility is located at 2100 Manchester Trafficway, Kansas City, Missouri 64126. Its approximate legal description is the SW 1/4 and NW 1/4 of NW 1/4 of S7, T7N, R32W, and its coordinates are latitude 39°07'30.0" N, longitude 94°29'32.0" W.

The facility lies adjacent to the Blue River. The UWR property meets the Blue River all along its northern edge (see Figure 3.1).



SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETRE

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Legend

Figure 3.1

Union Wire Rope Site (UWR)
USGS Topographic Map
Independence Quadrangle
Independence, MO
N3900-W9422.5/7.5
1964, Photorevised 1970 and 1975

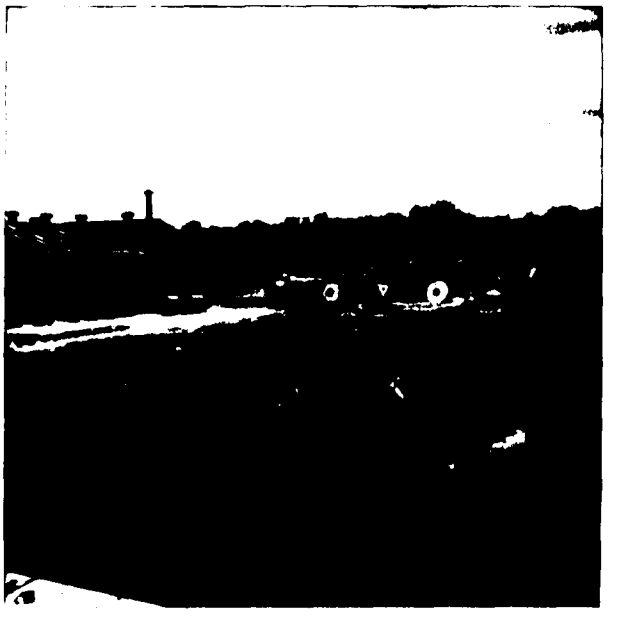
SECTION 4: PATHWAYS

Soil contamination has been documented and surface water contamination is alleged (Ref. RCRA file). A drain in the die cleaning room was used to dispose of solvents prior to the replumbing of the drain in 1982. It is alleged that the drain connected to a storm sewer which emptied into the Blue River (Ref. RCRA files). The Blue River flows north to the Missouri River which is used for drinking water.

On-site monitoring wells were installed near the tank where spent TCE is stored. The ARMCO Steel facility has an industrial water intake at (357.6 miles Mo. River) (Ref. TOPO). If other on-site spillage or disposal occurred, the contaminants would be expected to percolate through the soil into the groundwater and the surface water. Since groundwater is found approximately 15 feet below the surface it is very likely to become contaminated. The net precipitation is a negative 3.6 inches.

Penetration of the soil is expected to be relatively slow due to its high clay content. The soil is composed of approximately 14 feet of lean clay overlaying about 8 feet of fat clay overlaying lean clay (Ref COE). The clayey soil meets shale bedrock at approximately 65 feet below the surface. The soils are relatively impermeable to water (permeability about 10^{-6} cm/sec) (Ref. Meth.) but the permeability to chlorinated organics is untested.

Soil erosion was observed by the author along the northern edge of the UWR facility where it joins the Blue River. Since the Blue River often floods during heavy rains, it can be assumed that the soil has entered the river (see Figure 4.1).



Union Wire Rope Site

Figure 4.1

Facing West From Manchester Twy

5-7-84 1234 Hours
Photographer W.Kwoka

SECTION 5: RECEPTORS

The area surrounding the UWR facility is a mixture of industrial, residential and recreational areas. The west side of the Blue River is a mixture of industrial, residential and park areas while the east side of the river is industrial.

Twenty-six industrial buildings lie within 1000 feet of the facility. The industries include the Empire Iron and Metal Company, the E.K. Cambell Company, the Libby Welding Company, the Kerr-McGee Wood Preserving Plant and the W.S. Dickey Clay Manufacturing Company. The total number of off site employees within 1,000 feet of the UWR facility is estimated to be 130 (authors estimate based on 5 persons/bldg) in the area of concern if wastes were disposed of on-site. The UWR facility is extensive and probably employs several hundred people.

The area adjacent to the Blue River is part of the Kansas City park system and is used for recreational purposes. The number of people which use the river for recreation is unknown.

The Blue River empties into the Missouri River which is an indirect source of drinking water for the city of Independence, Missouri. The City of Independence gets part of its water from the city of Kansas City and the rest from wells which are located about seven miles downstream in the Missouri River alluvium (Ref. MWC).

SECTION 6: WASTE CHARACTERISTICS

The wastes which are known to have been handled on-site are paint wastes, dichlormethane, 1,1,1-trichloroethane and steel pickle liquor. The paint wastes are almost insoluble in water, but contain solvent(s) used as paint strippers and possibly heavy metals. No radioactive, infectious, carcinogenic, teratogenic or mutagenic materials were mentioned in the RCRA file.

The paint solvent which was reportedly used is dichloromethane. Dichloromethane is a volatile, non-flammable moderately toxic (Sax) chlorinated hydrocarbon having a solubility of 20,000 parts per million in water (Ref. Sax). It is moderately persistent in the environment, non-corrosive, and non-bioaccumulative (Ref. WREF).

Lead components were commonly used in paint formulations. It is unknown if lead or other heavy metals are present in the UWR paint wastes. Paints also tend to degrade into phenolic compounds which readily leach into the environment.

1,1,1-trichloroethane is a volatile, non-flammable, liquid halogenated solvent which is moderately toxic and nominally insoluble in water (Ref. Sax). It is also moderately persistent in the environment (Ref. JRB). Environmental concentrations of 1,1,1-TCE are not subject to dangerous reactivity, but the concentrated liquid can react violently with a number of chemicals which are not believed to be on site. Water is reported to hydrolyze 1,1,1-TCE to one-half of its concentration every six months (Ref. WREF). Steel pickle liquor (presumably sulfuric acid) is contaminated with iron and other metals that it has contacted. Crystaline ferrous sulfate is filtered from the liquor and sold to the Calcium Carbonate Co. in Saint Louis and the acid is recycled (Ref. RCRA file).

Steel pickle liquor wash is an acidic corrosive waste resulting from the pickling operation. The waste is treated in a pretreatment neutralization facility and discharged to a publicly owned treatment works (Ref. RCRA file).

SECTION 7: WASTE MANAGEMENT PRACTICES

The wastes which were listed in the RCRA file include paint wastes, pickle liquor, and chlorinated solvents. An unstated quantity of paint wastes were produced at the site. The waste was contaminated with paint strippers (dichloromethane). The disposal method (prior to 1980) for paint wastes was unstated in the RCRA file. After a RCRA inspection in 1982, the UWR facility determined that the paint wastes should be considered to be hazardous and started sending the wastes to approved hazardous waste sites (Ref. RCRA file).

The pickle liquor is recycled and is not disposed of except as neutralized pickle liquor wash. Ferrous sulfate builds up in the pickle liquor. When crystals of ferrous sulfate form, they are filtered from the liquor, collected and sold.

The chlorinated solvent, 1,1,1-trichloroethane was reportedly used at a rate of 100-150 gallons per month (Ref. RCRA file). Of that amount an estimated 80 gallons per month were poured into a drain and the remainder was stored in a 700 gallon tank for later burning in a boiler. The drain reportedly emptied into the Blue River. A small spill of 1,1,1-trichloroethane occurred near the waste storage tank in August of 1982. The contaminated soil was removed and monitoring wells were installed in the vicinity of the tank from which the spill occurred.

The facility appears to be easily accessible both from the river and from Manchester Trafficway. It is unknown if children play in and/or around the facility.

SECTION 8: RECOMMENDATIONS AND CONCLUSIONS

The information found in the EPA RCRA file indicates that some recent hazardous waste management problems have occurred and been rectified. The RCRA information shows that problems detected in 1982 have been corrected. The federal, state, and local files contain insufficient information to determine which hazardous wastes have been handled on-site, their quantities and how they were managed. Since the UWR contact, Mr. Leland Scott, would not release information without a formal written request, a RCRA Section 3007 letter should be sent by the EPA. The letter should request 1) a list of the types and quantities of wastes generated, 2) information about spills or on-site disposal, and 3) if no on-site disposal occurred, where and how were the wastes disposed.

SECTION 9: REFERENCES

COE: Boring number D-26 done by the Corps of Engineers, on 5-15-75, along the Blue River Channel

Meth: "The Methodology for Rating the Hazard Potential of Waste Disposal Sites", Draft Final Report, Oct. 31, 1980 by JRB Associates, Inc., 8400 Westpark Drive, McLean, Virginia 22102

MWC: Missouri Water Company Employee, Mr. Lukrofka

RCRA file: This refers to the U.S. EPA RCRA file which is kept at the U.S. EPA Regional Office.

Sax: "Dangerous Properties of Industrial Materials", fifth edition, 1979, Van Nostrand Reinhold Company, New York, N.Y.

Topo: Topographic Map, Independence Quadrangle, Independence, MO., N3900-W9422.5/7.5 1964 Photorevised 1970 and 1975.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MO	MOD01686740

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Union Wire Rope Div. of Armco	2100 Manchester Trafficway				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Kansas City	MO	64126	Jackson		
09 COORDINATES LATITUDE: 39 07 30.0	LONGITUDE: 94 29 32.0				

10 DIRECTIONS TO SITE (Starting from nearest public road)

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
Armco Incorporated	7000 Roberts Street		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Kansas City	MO	64125	( )
~~07 OPERATOR (If known and different from owner)~~ - contact Leland Scott	08 STREET (Business, mailing, residential) 7000 Roberts Street		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Kansas City	MO	64125	(242) 5851

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☒ A. RCRA 3001 DATE RECEIVED ___/___/___ (MONTH DAY YEAR) ☒ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED 08/18/80 (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES DATE 08/__/82 (MONTH DAY YEAR) ☐ NO

BY (Check all that apply)

☒ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR

☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER _____ (Specify)

RCRA inspection

CONTRACTOR NAME(S) _____

02 SITE STATUS (Check one)	03 YEARS OF OPERATION
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN	____ (BEGINNING YEAR) ____ (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Sludge from waste water neutralization
Ferrous Sulfate
Sulfuric Acid
Methylene Chloride
1,1,1- Trichloroethane

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Available information is from 1982 on. Information about the types, quantities of hazardous wastes and the management practices prior to 1980, needs to be formally requested by the EPA.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☒ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)		03 TELEPHONE NUMBER
David Doyle	EPA		(374)6864
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
William Kwoka		Ecology and Environment	(913) 432-9961	5/14/84 (MONTH DAY YEAR)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MO	MOD01686740

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A SOLID
- ☐ B POWDER, FINES
- ☐ C SLUDGE
- ☐ D OTHER unknown (Specify)
- ☐ E SLURRY
- ☐ F LIQUID
- ☐ G GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS unknown
- CUBIC YARDS
- NO OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

- XX A TOXIC
- ☐ B CORROSIVE
- ☐ C RADIOACTIVE
- X D PERSISTENT
- X E SOLUBLE
- ☐ F INFECTIOUS
- ☒ G FLAMMABLE
- ☒ H IGNITABLE
- X I HIGHLY VOLATILE
- ☐ J EXPLOSIVE
- ☐ K REACTIVE
- ☐ L INCOMPATIBLE
- ☐ M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Unknown		Paint Sludge
OLW	OILY WASTE			Unknown
SOL	SOLVENTS	Unknown		Chlorinated Solvents
PSD	PESTICIDES			Unknown
OCC	OTHER ORGANIC CHEMICALS			Unknown
IOC	INORGANIC CHEMICALS			Unknown
ACD	ACIDS			Unknown
BAS	BASES			Unknown
MES	HEAVY METALS			Unknown

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	1,1,1-Trichloroethane	71-55-6			
SOL	Methylene Chloride	75-09-2			

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Trichloroethane	71-55-6	FDS		
FDS	Methylene Chloride	75-09-2	FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: MO | 02 SITE NUMBER: MOD01686740

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A GROUNDWATER CONTAMINATION | 02 [ ] OBSERVED (DATE _____) | [ ] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Unknown potential: Groundwater is approximately 15' below the soil surface. If burial or unmitigated spills occurred in the past, groundwater contamination is likely.

01 [X] B SURFACE WATER CONTAMINATION | 02 [ ] OBSERVED (DATE _____) | [ ] POTENTIAL | [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

EPA letter to Mr. Jerry K. Fuller, Union Wire Rope Div. of Armco Inc. Dated by stamp August 3, 1982. 1,1,1- Trichloroethane (approximately 80 gal./month) was being poured down a drain believed to empty into the Blue River.

01 [ ] C CONTAMINATION OF AIR | 02 [ ] OBSERVED (DATE _____) | [ ] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Unknown

01 [ ] D FIRE/EXPLOSIVE CONDITIONS | 02 [ ] OBSERVED (DATE _____) | [ ] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Unknown

01 [ ] E DIRECT CONTACT | 02 [ ] OBSERVED (DATE _____) | [ ] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Unknown. The public has access to the facility from the Blue River and from Manchester Trafficway.

01 [X] F CONTAMINATION OF SOIL | 02 [X] OBSERVED (DATE 08/27/82) | [ ] POTENTIAL | [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: < 1 (Acres) | 04 NARRATIVE DESCRIPTION

RCRA inspection. The affected area was cleaned up and analyzed for residual 1,1,1-TCE. Maximum TCE level found was 15.9 ppm.($Mg \cdot /Kg$). Information from samples taken July 11, 1983.

01 [ ] G DRINKING WATER CONTAMINATION | 02 [ ] OBSERVED (DATE _____) | [ ] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Unknown, but highly unlikely because the nearest water intake is about seven miles downstream.

01 [ ] H WORKER EXPOSURE/INJURY | 02 [ ] OBSERVED (DATE _____) | [ ] POTENTIAL | [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Unknown

01 [ ] I POPULATION EXPOSURE/INJURY | 02 [ ] OBSERVED (DATE _____) | [ ] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Unknown

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MO	MOD01686740

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names(s) of species)

Unknown

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

NO

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None Known

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☒ OBSERVED (DATE: 08/18/82) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Workers were observed pouring 1,1,1-TCE into a drain. The drain allegedly connected with storm drains that emptied into the Blue River.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☒ OBSERVED (DATE: 7/84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Workers were observed using the drain which emptied into the Blue River.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

The RCRA files were insufficient to determine whether their spills or on-site burial have occurred. It is possible that containerized wastes are buried on-site.

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

Although the city, state and federal files do not suggest on-site disposal other than that which was noted, they do not cover the time before 1980. A formal request for information concerning the waste types, quantities, and waste management practices should therefore be made.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA Files, city and state presonnel